

In the claims

1. A packet based display interface arranged to couple a multimedia source device to a multimedia sink device, comprising:

- a transmitter unit coupled to the source device arranged to receive a source video data stream in accordance with a native video data rate;
- a receiver unit coupled to the sink device; and
- a linking unit coupling the transmitter unit and the receiver unit arranged to transfer the video data in the form of a number of main link characters at a link character clock rate that is independent of the native stream rate such that video data and the link character clock are asynchronous to each other .

2. A packet based display interface as recited in claim 1, wherein the multimedia data packet stream is one of a number of multimedia data packet streams each having an associated adjustable data stream link rate that is independent of the native stream rate.

3. A display interface as recited in claim 1, wherein the link unit further comprises:

- a unidirectional main link arranged to carry the multimedia data packets from the transmitter unit to the receiver unit; and

- a bi-directional auxiliary channel arranged to transfer information between the transmitter unit and the receiver unit and vice versa.

4. A display interface as recited in claim 3, wherein the bi-directional auxiliary channel is formed of a uni-directional back channel configured to carry

information from the sink device to the source device and a uni-directional forward channel included as part of the main channel for carrying information from the source device to the sink device in concert with the back channel.

5. A display interface as recited in claim 2, wherein the main link unit further comprises:

a number of virtual links each being associated with a particular one of the multi media data packet streams wherein each of said virtual links has an associated virtual link bandwidth and a virtual link rate.

6. A display interface as recited in claim 5, wherein a main link bandwidth is at least equal to an aggregate of the virtual link bandwidths.

7. A display interface as recited in 1, wherein the source data stream is packetized over the respective virtual link based upon a mapping definition.

8. A method of coupling a multimedia source device to a multimedia sink device, comprising:

receiving source video data in accordance with a native video data rate;

transferring the video data in the form of a number of main link characters at a link character clock rate that is independent of the native stream rate such that video data and the link character clock are asynchronous to each other.

9. A method as recited in claim 8, wherein the multimedia data packet stream is one of a number of multimedia data packet streams each having an

associated adjustable data stream link rate that is independent of the native stream rate.

10. A method as recited in claim 8, wherein the link unit further comprises:

a unidirectional main link arranged to carry the multimedia data packets from the transmitter unit to the receiver unit; and

a bi-directional auxiliary channel arranged to transfer information between the transmitter unit and the receiver unit and vice versa.

11. A method as recited in claim 10, wherein the bi-directional auxiliary channel is formed of a uni-directional back channel configured to carry information from the sink device to the source device and a uni-directional forward channel included as part of the main channel for carrying information from the source device to the sink device in concert with the back channel.

12. A method as recited in claim 8, wherein the main link unit further comprises:

a number of virtual links each being associated with a particular one of the multi media data packet streams wherein each of said virtual links has an associated virtual link bandwidth and a virtual link rate.

13. A method as recited in claim 12, wherein a main link bandwidth is at least equal to an aggregate of the virtual link bandwidths.

14. A method as recited in claim 8, wherein the source data stream is packetized over the respective virtual link based upon a mapping definition.

15. Computer program product for coupling a multimedia source device to a multimedia sink device, comprising:

computer code for receiving source video data in accordance with a native video data rate;

computer code for transferring the video data in the form of a number of main link characters at a link character clock rate that is independent of the native stream rate such that video data and the link character clock are asynchronous to each other; and

computer readable medium for storing the computer code.

16. Computer program product as recited in claim 15, wherein the multimedia data packet stream is one of a number of multimedia data packet streams each having an associated adjustable data stream link rate that is independent of the native stream rate.

17. Computer program product as recited in claim 15, wherein the link unit further comprises:

a unidirectional main link arranged to carry the multimedia data packets from the transmitter unit to the receiver unit; and

a bi-directional auxiliary channel arranged to transfer information between the transmitter unit and the receiver unit and vice versa.

18. Computer program product as recited in claim 17, wherein the bi-directional auxiliary channel is formed of a uni-directional back channel configured to carry information from the sink device to the source device and a uni-directional forward channel included as part of the main channel for carrying information from the source device to the sink device in concert with the back channel.